



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/823,756	04/03/2001	Takahiro Matsuda	826.1713	9121

21171 7590 02/09/2005

STAAS & HALSEY LLP  
SUITE 700  
1201 NEW YORK AVENUE, N.W.  
WASHINGTON, DC 20005

EXAMINER

PICH, PONNOREAY

ART UNIT	PAPER NUMBER
----------	--------------

2135

DATE MAILED: 02/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/823,756

Applicant(s)

MATSUDA ET AL.

Examiner

Ponnoreay Pich

Art Unit

2135

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 1 is/are ~~withdrawn from consideration~~ *canceled*.
- 5) ☒ Claim(s) 9 is/are allowed.
- 6) ☒ Claim(s) 2-8 and 10-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

Concerning the applicant submitted amendments filed on 8/20/2004, claim 1 was cancelled; claims 3-6 and 10-14 were modified. Claims 2-14 are pending. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.

#### ***Docketing***

Please note that the application has been redocketed to a different examiner. Please refer all future communications regarding this application to the examiner of record, using the information supplied in the final section of the office action.

#### ***Response to Amendment***

The examiner note the amendments made by the applicant. The examiner also notes that there were some claims that were deemed allowable by the previous examiner. The current examiner disagrees with some of the previous examiner's assessments and will present new rejections below.

#### ***Response to Arguments***

Applicant's arguments filed 8/20/2004 have been fully considered but they are not persuasive. See rejection of claims below.

#### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Art Unit: 2135

Claim 11 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 11 refers to "a propagation signal". This does not fall under one of the categories of statutory subject matters

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 2, 4-6, and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Lopresti (U.S. 6,298,173).

**Claim 2:**

Lopresti discloses a data storage device, comprising:

- a. A data storage unit storing a plurality of files each having a plurality of attributes (col 3, lines 20-30 and col 4, lines 40-60).
- b. A rule setup storing a ranking rule for ranking the files for each of the attributes (Fig 13; col 9, lines 15-20 and 35-40).

Art Unit: 2135

- c. An assignment unit assigning reduction ranking to each of the file on the basis of ranking rules associated with the attributes (col 9, lines 55-65).
- d. A reduction unit reducing data in each file according to the reduction ranking when a storage capacity of the data storage unit is insufficient for new data storage (col 2, lines 15-20 and col 8, lines 10-15).
- e. Wherein the rule setup unit further stores application ranking of each of the ranking rules associated with the attributes, and the assignment unit applies the ranking rules in the application ranking order to determine the reduction ranking of the files (col 9, lines 51-64).

**Claim 4:**

Lopretsi discloses all the limitations of claim 2. In addition, Lopretsi discloses a data storage device further comprising an edit unit editing information stored in the rule setup unit (col 9, lines 15-30).

**Claim 5:**

Lopretsi discloses all the limitations of claim 2. In addition, Lopretsi discloses a data storage device further comprising a reduction ranking storage unit storing the reduction ranking of the files, and wherein the assignment unit determines the reduction ranking during an idle time in processing associated with the data storage unit and stores the reduction ranking in the reduction

Art Unit: 2135

ranking storage unit (col 7, lines 45-60; col 8, lines 1-10; and col 9, lines 1-10 and 50-55).

**Claim 6:**

Lopretsi discloses all the limitations of claim 2. In addition, Lopretsi discloses the data storage unit includes a buffer area into which data is written temporarily when the storage capacity is insufficient, and the reduction unit reduces data in each file after data has been written into the buffer area (col 10, lines 9-12).

**Claim 8:**

Loprest discloses a data storage device, comprising:

- a. A data storage unit storing a plurality of files each having a plurality of attributes (col 3, lines 20-30 and col 4, lines 40-60).
- b. A rule setup storing a ranking rule for ranking the files for each of the attributes (Fig 13; col 9, lines 15-20 and 35-40).
- c. An assignment unit assigning reduction ranking to each of the file on the basis of ranking rules associated with the attributes (col 9, lines 55-65).
- d. A reduction unit reducing data in each file according to the reduction ranking when a storage capacity of the data storage unit is insufficient for new data storage (col 2, lines 15-20 and col 8, lines 10-15).
- e. An algorithm storage unit storing application ranking of a plurality of reduction processing algorithms, and wherein the reduction unit

determines a combination of a reduction processing algorithm and a file whose data is to be reduced on the basis of the application ranking of the reduction processing algorithms and the reduction ranking of the files (col 9, lines 51-64).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lopresti (U.S. 6,298,173) in view of Kenley et al (U.S. 5,276,867).

**Claim 3:**

Lopresti discloses all the limitations of claim 2. Lopresti does not explicitly disclose the rule setup unit further stores weight information for each of the attributes and the assignment unit calculates the total of the attributes of each file on the basis of the weight information and determines the reduction ranking of the files on the basis of the total of the attributes. However, Kenley discloses the rule setup unit further stores weight information for each of the attributes, and the assignment unit calculates the total of the attributes of each file on the basis of

Art Unit: 2135

the weight information and determines the reduction ranking of the files on the basis of the total of the attributes (col 22, lines 50-60).

One of ordinary skill would have been motivated to combine Kenley's teachings with the system disclosed by Lopresti as it would have allowed for a better ranking algorithm based on the total weight of the attributes of a file which can then be used to decide which order to delete the files.

3. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lopresti (U.S. 6,298,173) in view of Gavron et al (How to Use Microsoft Windows NT 4 Workstation).

**Claim 7:**

Lopresti discloses a data storage device, comprising:

- a. A data storage unit storing a plurality of files each having a plurality of attributes (col 3, lines 20-30 and col 4, lines 40-60).
- b. A rule setup storing a ranking rule for ranking the files for each of the attributes (Fig 13; col 9, lines 15-20 and 35-40).
- c. An assignment unit assigning reduction ranking to each of the file on the basis of ranking rules associated with the attributes (col 9, lines 55-65).
- d. A reduction unit reducing data in each file according to the reduction ranking when a storage capacity of the data storage unit



Art Unit: 2135

is insufficient for new data storage (col 2, lines 15-20 and col 8, lines 10-15).

Lopresti does not disclose the following, which is disclosed by Gavron: a restoration unit restoring a data-deleted file to the original file, and wherein the data storage unit stores a virtual file containing file information of the original file and link information that points to real data of the data-deleted file and the restoration unit restores the data-deleted file to the original file on the basis of information in the virtual file (Gavron page 16-17). One of ordinary skill would incorporate a Recycle Bin as disclosed by Gavron into the system of Lopresti as it would allow for restoration of accidentally deleted files (Gavron page 17, item 2).

4. Claims 10 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lopresti (U.S. 6,298,173).

**Claim 10:**

Lopresti discloses a computer read-able recording medium recorded with a program for storing a computer, the program allowing the computer to perform:

- a. Storing a plurality of files each having a plurality of attributes (col 3, lines 20-30 and col 4, lines 40-60).
- b. Storing a ranking rule for ranking the files for each of the attributes (Fig 13; col 9, lines 15-20 and 35-40).

Art Unit: 2135

- c. Assigning reduction ranking to each of the plurality of file on the basis of ranking rules associated with the attributes of the respective files (col 9, lines 55-65).
- d. Reducing data in each file according to the reduction ranking when a storage capacity is insufficient for new data storage (col 2, lines 15-20 and col 8, lines 10-15).
- e. Wherein the reducing applies the ranking rules in the application ranking order to determine the reduction ranking of the files (col 2, lines 15-20; col 8, lines 10-15; and col 9, lines 51-64).

Lopresti does not explicitly disclose reducing data includes at least one of file deletion, data compaction, document summarization, and file saving.

However, file deletion, data compaction, document summarization, and file saving are standard file/data operations that were known at the time the applicant's invention was made. Any system dealing with files or data would naturally have file deletion, data compaction, document summarization, and file saving as part of its functionality.

**Claim 12:**

Lopresti discloses a data reduction method comprising:

- a. Setting up a ranking rule for ranking a plurality of files for each of the attributes of the files (col 3, lines 20-30 and col 4, lines 40-60; Fig 13; col 9, lines 15-20 and 35-40).
- b. Storing application ranking of each of the ranking rules associated with the attributes (col 9, lines 51-64).

Art Unit: 2135

- c. Assigning reduction ranking to each of the files on the basis of ranking rules associated with the attributes (col 9, lines 55-65).
- d. Reducing data in each of the files according to the reduction ranking when data storage capacity is insufficient for new data storage (col 2, lines 15-20 and col 8, lines 10-15).
- e. Wherein the reducing applies the ranking rules in the application ranking order to determine the reduction ranking of the files (col 2, lines 15-20; col 8, lines 10-15; and col 9, lines 51-64).

Lopresti does not explicitly disclose reducing data includes at least one of file deletion, data compaction, document summarization, and file saving.

However, file deletion, data compaction, document summarization, and file saving are standard file/data operations that were known at the time the applicant's invention was made. Any system dealing with files or data would have file deletion, data compaction, document summarization, and file saving as part of its functionality.

**Claim 13:**

Lopresti discloses a data storage device, comprising:

- a. A data storage means for storing a plurality of files each having a plurality of attributes (col 3, lines 20-30 and col 4, lines 40-60).
- b. A rule setup means for storing a ranking rule for ranking the files for each of the attributes (Fig 13; col 9, lines 15-20 and 35-40).

Art Unit: 2135

- c. Assignment means for assigning reduction ranking to each of the file on the basis of ranking rules associated with the attributes (col 9, lines 55-65).
- d. Reduction means for reducing data in each file according to the reduction ranking when a storage capacity of the data storage unit is insufficient for new data storage (col 2, lines 15-20 and col 8, lines 10-15).
- e. Wherein the rule setup means further stores application ranking of each of the ranking rules associated with the attributes, and the assignment unit applies the ranking rules in the application ranking order to determine the reduction ranking of the files (col 9, lines 51-64).

Lopresti does not explicitly disclose reducing data includes at least one of file deletion, data compaction, document summarization, and file saving.

However, file deletion, data compaction, document summarization, and file saving are standard file/data operations that were known at the time the applicant's invention was made. Any system dealing with files or data would have file deletion, data compaction, document summarization, and file saving as part of its functionality.

**Claim 14:**

Lopresti discloses a data storage method comprising:

- a. Ranking stored files using ranking rules that consider plural file attributes (col 8, lines 30-35 and col 9, lines 1-10).

Art Unit: 2135

- b. Determining whether data storage capacity will be exceeded when a new file is to be stored (col 8, lines 1-15).
- c. Storing application ranking of each of the ranking rules associated with the attributes (col 9, lines 51-64).
- d. Reducing a storage space needed for a file with the highest rank until the new file can be stored (col 8, lines 30-50).
- e. Storing the new file (col 8, lines 30-50).
- f. Wherein the reducing applies the ranking rules in the application ranking order to determine the reduction ranking of the files (col 2, lines 15-20; col 8, lines 10-15; and col 9, lines 51-64).

Lopresti does not explicitly disclose reducing data includes at least one of file deletion, data compaction, document summarization, and file saving.

However, file deletion, data compaction, document summarization, and file saving are standard file/data operations that were known at the time the applicant's invention was made. Any system dealing with files or data would inherently have file deletion, data compaction, document summarization, and file saving as part of its functionality.

#### ***Allowable Subject Matter***

Claim 9 was indicated as allowable by the previous examiner; the current examiner agrees. Though claim 9 contain some subject matter disclosed by the prior art, the prior art neither singly nor in combination disclose of data reduction speed storage unit storing data reduction speed for each of a plurality of combinations of a reduction processing algorithm and a file whose data is to be

Art Unit: 2135

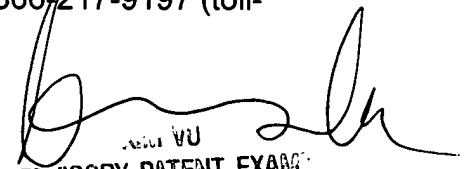
reduced, and wherein the reduction unit calculates a target reduction speed and makes a comparison between the target reduction speed and the data reduction speed stored in the data reduction speed storage algorithm and file whos data is to be deleted. This provides a reduction for the process that are applied to the files, thereby allowing a user to quickly obtain storage space (Specification, page 24, line 23-page 35, line 25).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ponnoreay Pich whose telephone number is 571-272-7962. The examiner can normally be reached on 8:00am-4:30pm Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on 571-272-3859. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



KIM VU  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 21